

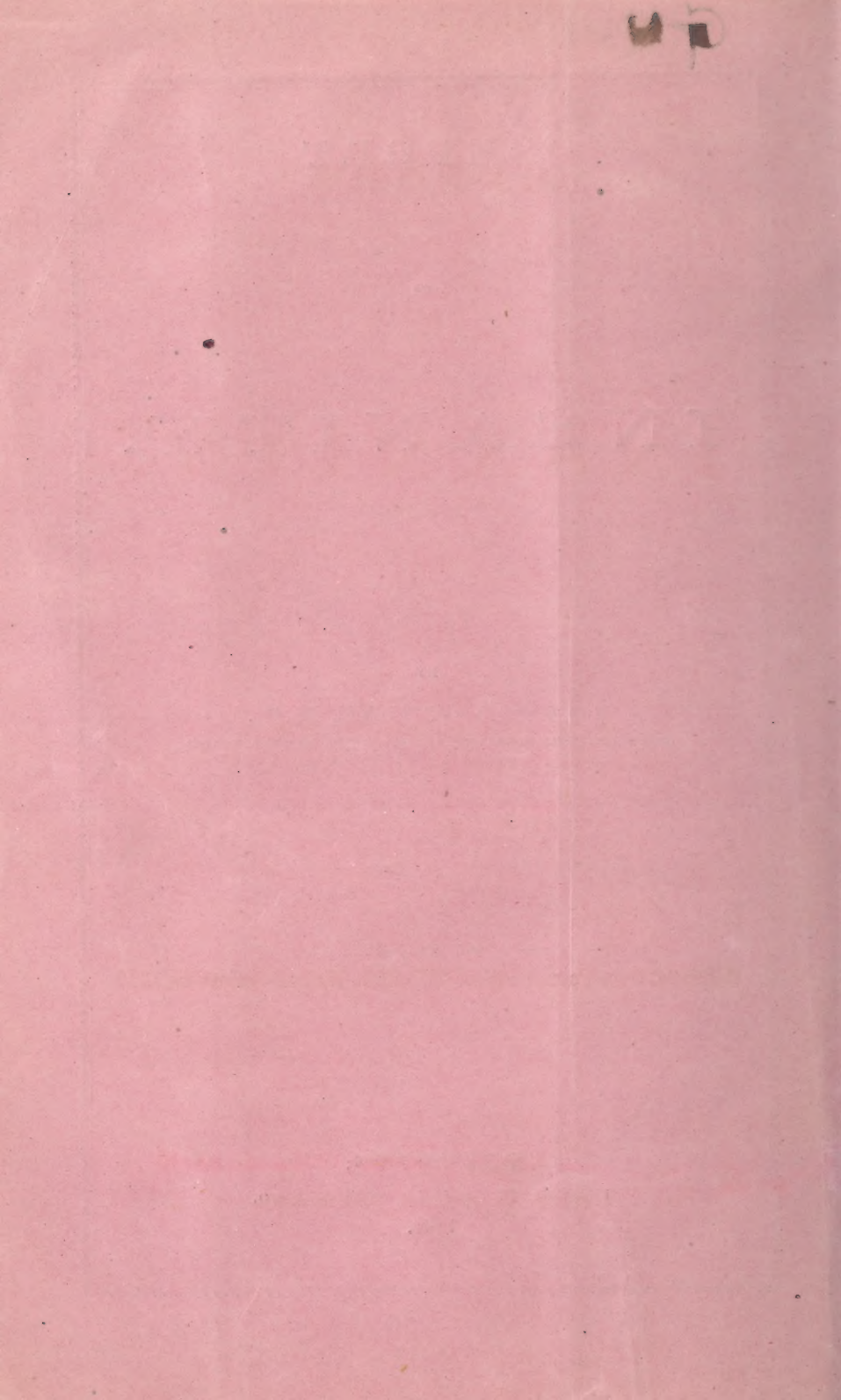
GUNDRY (R.)

REPORT
ON
INSANITY.

BY
RICHARD GUNDRY, M.D.,
ASSISTANT PHYSICIAN TO THE SOUTHERN OHIO LUNATIC ASYLUM, AT DAYTON.



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REPORT.

THERE are two modes of presenting the subject of Insanity for consideration, two stand-points from which it may be viewed, and by which, as we adopt the one or the other position, our impressions concerning it may be modified. The more general view of insanity taught almost exclusively (whenever insanity forms the subject of medical teaching) presents its relations to jurisprudence and legislation. How far does its existence modify human action and liability for the usual consequences of actions, and conversely, how far does a certain action or series of actions indicate unsoundness of mind in the individual whose conduct is investigated? These are the propositions most frequently discussed, and belong alike to the jurist and the physician. The influence of insanity in controlling thought and actions, its insidious traces in conduct where it had been least suspected, its gradual progress from those delicate tints (if I may so compare differences of character) to the lurid light of raving madness, or the sombre gloom of mental darkness; these have been studied not only by medical men, but (and perhaps more deeply) by jurists who have framed legal dicta upon the result of such observations; and as correctly in the main, and far more vividly portrayed by those keen observers of man and nature, the great poets and novelists, who faithfully hold "the mirror up to nature." Homer and Shakspeare, Sophocles and Webster, have daguerreotyped many of the phases of human madness so inimitably as to be recognized in all ages as faithful portraits, whatever may be the prevalent ideas of the causes and history of the disease in different periods. And among novelists, how exquisitely have Cervantes and Scott and Richardson interwoven, in their bright pictures of human actions, the more sombre shades of mental weakness and affliction!

But there is another, and to physicians equally as important a side of the picture to be examined. What are the relations of insanity to the general science of medicine? What influence does the existence of insanity exert upon the various processes of the body? What conditions, on the other hand, give rise to or co-exist with this morbid state of the mind? What are the signs and symptoms of this diseased action, and to what extent are they capable of being influenced by external agencies, by remedies, etc.? The general causes that contribute to the existence of insanity, or to its spread, and those special agents which determine the attack at a certain time in a certain individual? Have we any evidence to show that any age, any condition of life, and any class of circumstances, are more favorable than others to the production of insanity? These are some of the questions which it is important that physicians should pay special attention to, as more nearly concerning them personally than the nicer and more intricate inquiries as to the extent responsibility may be modified by the weakness and vagaries of the human mind; and these matters I propose to discuss in the present report. I shall assume that we have to deal simply with insanity as diseased action which we may be called upon to treat—to cure, if possible, or to palliate, if that only be within the resources of our art. In this plan I shall regard the insane as patients to be prescribed for, of whose diseases we have to form a correct diagnosis as well of their origin as of their character, whose usual course of phenomena we must learn; the disturbing circumstances of which we must calculate, to estimate their force and endeavor to anticipate, and whose probable terminations it may be our duty to foresee; to assist in bringing about, or delay where we cannot prevent. These remarks, therefore, will be simply addressed to the *Medical Aspects of Insanity*, and will not in any way consider its juridical relations.

At the outset of our task, it may be well to state that in the general term of *Insanity* may be included, from a merely medical point of view, various mental conditions which would not be accepted as sufficient to absolve from crime nor to disqualify the individual from his legal privileges as a citizen, and which nevertheless often come under our hands for proper treatment. For insanity, in a medical point, whatever it may be in a juridical relation, is not a single dis-

ease—an entity, in the same way as small-pox, typhoid fever, or pneumonia, which, however different some of their symptoms may be in different persons, have yet so many points of agreement wherever and under whatever circumstances they appear, as to preclude all difficulty of recognition, but may be regarded more strictly as a condition or series of phenomena occurring in the course of various diseases, or in consequence of various and even opposite pathological lesions—a condition the only bond of union in many cases of very oppositely marked and varied symptoms of the morbid changes going on. In a somewhat similar way “headache,” no disease itself, and dependent upon no fixed and certain lesion, may indicate the existence of one or the other very opposite pathological conditions. The symptoms are real, easily identified and described, or even classified, but it is not always so easy to arrive at the exact cause that induced their presence, or the train of morbid phenomena which perpetuates their unpleasant sway. So mental unsoundness may arise from numerous exciting sources of disturbance, be continued by the progress of very different pathological changes, and be influenced by very various and contrary circumstances. It is not always given to us to guess what exact point of pathological departure mental aberration may indicate—this is evident—that may be unknown, or dimly, very dimly shadowed forth to our minds. We know something of several groups of phenomena which constitute that condition of a patient which is termed insanity, but beyond this—not itself too clear—we must grope our way over a path rugged at all times, here and there on well marked roads, but ever and again very uncertain in its direction and hard to trace. *What, then, is insanity?* Who can give its definition?

—“For to define true madness”—

What is 't? But to be nothing else but mad.—*Shakspeare.*

For our present purpose, it will be sufficient to regard insanity as *that condition of mind wherein, from disease, there is a deviation in the intellectual, moral or instinctive faculties from the sound and healthy standard of that individual.* I know it will not be difficult to pick a flaw in this definition of insanity, but I simply present it as a postulate to start with in the following remarks. There are two essen-

tial features which must be introduced in every attempt to define insanity :

1. That manifest alteration in conduct or thought, *must be the result of disease.*

2. That unsoundness of mind is to be judged by a comparison of the mind in ordinary health of the individual affected, not by any standard external to him.

Failing to embrace these two propositions, all descriptions omit the most characteristic and essential features of the disease. Without regard to them, we may easily establish a standard of comparison in our own minds, to which, like the bed of Procrustes, every opinion and action must exactly square or be condemned. Wherein they agree with us, they are right and sane by this method ; whatever differs from us, must be wrong and unsound. Or, neglecting both propositions, we may assume every departure from the absolute "true and right" as insanity, and conclude with the old rhyme :

" All men are mad,
In spite of all finesse ;
The only difference doth consist
In being more or less "—

an opinion which entailed upon Dr. Haslam no small share of obloquy and ridicule. We may always avoid these errors, if we recognize the distinction that the unsound phenomena must be the consequence of diseased action, and are to be estimated by a comparison of the mental and moral manifestations of the individual before the supposed invasion of the disease. After all, when we review the numerous attempts to define insanity by men of unquestioned ability and largest experience, we cannot but coincide, in the opinion so tersely expressed by Dr. Burrows, that "a definition suitable to every form of insanity is an *ignis fatuus* in medical philosophy which all follow, and which eludes and bewilders pursuit."

It seems to be conceded by all parties that mental disease is gradually increasing, not only because the number of the insane is absolutely greater than formerly, as might be expected, but also because this number bears a much higher proportion to the general population than during any previous age, and to a certain extent varies in

different countries and localities correspondingly with the state of civilization which prevails therein. An estimate of this proportion, calculated on data derived from various sources, though doubtless not free from error, will illustrate this subject sufficiently for our purpose. It is assumed that the proportion of the insane to the general population, is—

In France.....	1 in 795	Florence.....	1 in 338
Norway.....	1 in 551	Turin.....	1 in 344
Rhenish Provinces.....	1 in 666	Rome.....	1 in 481
England and Wales.....	1 in 300	Dresden.....	1 in 466
Scotland.....	1 in 390	Naples.....	1 in 759
Massachusetts.....	1 in 302	St. Petersburg.....	1 in 3,142
London.....	1 in 200	Madrid.....	1 in 3,350
Paris.....	1 in 222	Cairo.....	1 in 23,571
Milan.....	1 in 242		

With ample allowance for any errors in the formation of some of the above statements, it is sufficiently clear that in the principal seats of civilization, mental disease is most rife, and a comparison of these figures with the estimates of statisticians twenty years ago, will show that the relative increase has followed the same law. It is admitted that a part of this increase is more apparent than real, and can be accounted for by the supposition that the cases which exist are more readily known and collected for comparison, and that various mental conditions which at that time were considered to possess doubtful claims to be classified under this name, are now recognized under the general term of insanity. Making due allowance on these accounts, there yet remains a large and yearly increasing balance, which in general terms is charged upon the progress of civilization. The term is very vague, and we cannot stay to define it exactly, were a definition even possible. Few persons can frame a formula to describe what they regard as the essentials of beauty; but fewer still who do not instinctively recognize its influence and presence. Civilization stands in a somewhat similar position, difficult to describe, yet each mind projects an ideal standard by which to measure the condition of communities or of individuals, with reference to the extent of the civilization they exhibit. For our purpose it is sufficient to remember that civilization includes the diffusion of knowledge, the constant increase of industrial pursuits, and of individual and personal comforts among the people; that it is necessarily a state of transition towards the “sup-

posed condition of happiness and well-being of the community or individual"—a state always imperfect, and the more advanced it becomes, the more it comes into contact with the darkness and misery it aims to destroy. It compels, therefore, to incessant exertions, as it urges all within its power onward in the race of life, by bringing within the *apparent* reach of all, the prize they so much covet. Wealth, distinction, ease and luxury, are the sirens which ever beckon the tempest-tossed mariner, and these become year by year less attainable by mere deeds of prowess; by animal courage or personal strength—the chief elements of success in all primitive æras. Mere manual toil is replaced by the labor-saving machine. The *brain labor* is substituted to a great extent for mere manual dexterity and toil. But the wants of man have increased equally with his ability to invent the means of supply, and it necessarily happens that to the individual they may have become imperious, while circumstances keep him from the source of supply. This arises, of course, from the imperfections of all our civilization, which gives rise to several classes of persons comparatively unknown in the more simple ages of a people. One which bears a fixed relation to society at large, comprises those who, with more actual comforts than could ever have been acquired by them, or the class they seem most to resemble in previous generations, have wants and impulses and aspirations implanted in them by the spirit and circumstances of their own days which they are powerless to satisfy. Harassing mental toil, keen sensitiveness and bitter disappointments, form their daily lot. Then, there are those who, solely by the efforts of others, have been placed in such circumstances that their wants are readily supplied without any of that stimulus to exertion which must exist were their comforts to depend upon the results of their own efforts. The tendency in these is to concentration upon their own personal tastes all their time and money; to neglect that efficient bodily and mental labor without which nature cannot long be kept in good working order; to forget the dependent condition of every individual to society at large, and to ignore the duties it claims at their own hands—a neglect sooner or later revenged upon them. Their physical and moral natures are never fully developed, unless a storm sweeps over their

path and clears away the mephitic atmosphere which surrounds them, leaving them, it may be, with some severe scars, but stronger and healthier for the struggle, or it finds them too weakly for the trial, and utterly prostrates and overwhelms them in its fury. To these we may add, as another product of civilization, that body of minds constantly at work to supply the demands created by the age for the results of mental toil, whether it be for new machinery to economize labor, devices to increase the influence of capital, or the development of principles to guide mankind in their intellectual, moral or political relations. Their position, as it were, at the helm of society exposes them to peculiar and manifold evils. This class is constantly increasing. Both the good and evil incident to their condition, also increase alike. These three classes comprise a large and daily becoming larger portion of society, compared with the plodding and evenly balanced men, who calmly do their appointed work, and bide with unswerving courage and reliance their appointed time and destiny. Though they differ from each other in most of their characteristic qualities, the three agree in *one* striking peculiarity. In each the nervous forces have been developed at the expense of their other powers. It is a train ready laid and only awaits a very slight spark to bring on an explosion. This greater susceptibility to nervous impressions and liability to *hyperæsthesia*, is shown in the great increase in the community of liability to headaches—to dyspepsia—to hysteria, and especially in the *diminished power of resistance shown to physical depressing agents*. The Indian woman, about to become a mother, steps aside to the retirement afforded by a denser part of the forest through which she happens to journey, and soon rejoins her lord and his tribe with the new-born babe. Among the sturdy toiling classes in all countries, we find women inured to labor from infancy, knowing few luxuries and caring for less, to whom parturition is scarcely more troublesome. A day or two sees them again at their accustomed duties with unimpaired vigor. Yet to one of the second class I have pointed out, the shock experienced from even an easy labor, is usually grave and not unfrequently critical. Long and tedious convalescence—sometimes serious uterine derangements—more often vexatious hysterical affections, are encountered before re-

covery is complete. If, therefore, civilization adds to the knowledge and happiness of the general community where it is developed; if it also intensifies individual pleasure by elevating its sources—and who can doubt these propositions?—it also distills from the same alembic, to mix with these sweets, some subtle and pervading poisons for the torture of the individual.

“—The individual withers and the world is more and more.”

The same influence of civilization which thus assists the prevalence of those diseases which, like hysteria, neuralgia, epilepsy and others, depend upon the disturbance of the equilibrium of the nervous forces, or tend to diminish the powers of resistance to the encroachment of *all* disease, may undoubtedly play an important part in the production of insanity. And here I think it may be found that its influence is principally to be discerned in the feeble stand that the system makes to slight physical causes—so slight, oftentimes, that they are ignored in the attempt to search for the origin of the disorder in many cases, and a *post hoc propter hoc* argument is substituted, which ascribes the disease to some moral cause with which the patient has been brought into contact. It is stated by many authors that physical evils are the sole cause of insanity among the ruder nations, but they contend that among the more civilized peoples moral causes greatly predominate. I cannot avoid the reflection that too often the truth I have endeavored to point out has been overlooked in such statements; that it is equally as plausible and more consonant with sound pathology to admit that among the more primitive people and classes, the cause can usually be traced to palpable and well-marked physical evils; and that among the more refined or more civilized, apparently lesser and more obscure physical influences accomplish the same end—the only difference being in the power of resistance possessed by the two classes. This of course does not exclude from our consideration those powerful moral agents which sometimes appear to overthrow the mind without the apparent intervention of any phenomena of a purely physical nature. These, however, are more exceptional in their occurrence than it is generally believed; for it not unfrequently happens that in looking back upon the events which

marked the commencement of insanity, circumstances rather coincident than casual attract attention to the prejudice of the slighter but more intimately related physical troubles then present. To this point I shall more fully allude when I come to consider the special exciting causes of insanity.

Moreover, in our estimate of the influence exerted by civilization, we must not forget that while it diminishes the power of resistance in the individual, it at the same time adds to the number of external circumstances which may operate upon him as agents of a depressing nature. At best, all civilization, so far as yet attained by humanity, is but a transition to something beyond for which we strive. The nearer we approach the goal, the more it seems to fade from our touch. As Italy seemed to Æneas and his companions to grow ever farther from their reach the nearer they actually came to its shores, so from certain outlooks society may sometimes appear rather to be more degraded than elevated by the lapse of time. Comfort and riches may as a general rule have increased, and yet misery and crime prevail among certain classes in the same community more than in even savage countries. These are exempt from those alternations of prosperity and adversity which it introduces into society, and yet these very agents act upon more sensitive objects. This, properly speaking, may not be chargeable upon civilization, but only upon the imperfect forms it assumes in the advance to that true civilization which, when achieved, will heal all wounds and banish all sorrow. As Dr. Feuchtersleben remarks :

“It is not civilization, but the increasing want which it brings in its train—partial education—passions—emotions, etc., all which set the mind in passive motion; the forced culture to which they lead; the over-indulgence; these contain the reasons of the fact. Civilization as external education, is but a transition to culture as internal education; and in this first stage it produces evils for which it furnishes the remedy in the higher stages. It carries the poison and the antidote in the same hand.”

From this very general view of civilization or the progress of society, as an element in the predisposition to mental disease, we may turn to consider the influence exerted by widely diffused physical

agents, or the aggregate of such, as Seasons—Climate. Concerning the influence of Seasons, the following statistics furnish some interesting information. They are derived from the reports of Institutions in the United States:

March.....	1283	
April.....	1339	
May.....	1497	
	—	4119—In Spring months.
June.....	1555	
July.....	1409	
August.....	1223	
	—	4187—In Summer months.
September.....	1314	
October.....	1336	
November.....	1305	
	—	3955—In Fall months.
December.....	1146	
January.....	1107	
February.....	1107	
	—	3360—In Winter months.
		15,621

One circumstance is to be noted: This table represents only the month when the *admissions* took place, and does not necessarily agree with the month when the attack supervened. Still it furnishes an approximation to the period of commencement. The Summer months have the greatest number; next the Spring, and lastly the months of Winter. Let us compare this with other countries. M. Aubanel and Thore give the following table of admissions at the Bicetre, as well as the total admissions at a large number of Asylums:

	Bicetre from 1831-8.	Various Asylums.
Summer.....	1093	1818
Spring.....	997	1587
Autumn.....	955	1415
Winter.....	886	1344
	3931	6164

To this we may add the experience of Esquirol and others:

	Esquirol.	Guistain.	Parchappe.
Spring.....	406	61	1447, or 542 per cent.
Summer.....	445	55	
Autumn.....	365	58	1222, or 458 per cent.
Winter.....	341	50	
	1557	224	2669

The general fact may be deduced from all these data, that there is some correspondence between the warmth of the weather and mental disturbance. Dr. Webster states that the experience of Bethlem Hospital is to the same effect. "This result," says he, "is certainly at variance with the generally entertained opinion that madness prevails most commonly in London during the cold weather of winter, when suicides are also said to be frequent, especially in the murky month of November. Such an assumption is, however, erroneous, seeing insanity is not only met with to a greater extent during hot weather, but more cases of self-murder are usually recorded both in June and July than during the colder season." But, if hot weather favors the development of insanity, it does not follow that warmer climates have more insane persons. The contrary is the fact. In Sweden and Norway a larger portion of the inhabitants become mad than in any other part of Europe. The disease is more frequent in Northern Germany than Southern Germany. Mania prevails more in Belgium than in France, and more in the Northern than in the Southern Department of that Empire. In Northern Italy insanity is said to be twice as common as in Southern Italy. So, too, in the Northern portions of these United States, it is much more prevalent than in the sunny South.

But there are also atmospheric changes which exert an influence upon our feelings and health, of which we can furnish but little explanation. Yet every man is familiar with the fact that one day he feels clearer, more active and energetic—that the fresh air he breathes stimulates him to renewed vigor, while on another day it depresses him, makes him peevish and ill-tempered, although the circumstances surrounding him are on both days apparently similar. These impressions prevailing more or less in all countries, are thought by some to be more marked among us, and to act as an exciting agent upon our nervous susceptibilities. Thus, Dr. Ray observes, "The operation of the physical causes is aided in this country, there is much reason to believe, by peculiar atmospheric conditions. This is not the place for discussing the scientific question, but of the general fact that our climate produces a remarkable degree of nervous excitability, and thereby favors the development of insanity,

I think there can scarcely be a doubt. That our people are distinguished by restlessness, impulsiveness, impetuous and boisterous movement, may be regarded as a fixed fact. That this trait is to be attributed to atmospheric influences is rendered probable both by the absence of any other adequate cause and by the greater excitability which accompanies insanity in this country, as compared with others. This character of the disease strikes the most superficial observer, in passing through the galleries of American and European hospitals for the insane. In the former, especially those of the Northern and Eastern States, more excitement will meet his notice, in a single visit, than he will see in the latter, particularly the English, in a whole week or month. And yet this excitability is but little less apparent in the Germans, Irish and English, who abound in our hospitals, than in the native Americans." The limits of a report will not allow of any extended illustration of the connection of meteorological phenomena and the production of disease or the modification of its forms. Every one of us will recall to memory some persons who appear to be peculiarly susceptible to such impressions, and in whom lassitude and various unpleasant sensations always are present during certain conditions of the atmosphere. A less degree of this same influence is doubtless experienced by all, though the symptoms cannot be distinctly pointed out, still less can they be explained at all satisfactorily. The phrase "being under the weather," to denote a general feeling of being slightly unwell, is probably the general acknowledgment of this obscure connection, which language has thus embalmed. This whole subject derives much light from the well authenticated histories of other countries, where meteorological phenomena induce very striking effects upon the human system. In *Buenos Ayres*, according to Sir Woodbine Parish, there is a wind which sometimes prevails, and produces in some persons peculiar irritability and ill-humor, almost amounting to a disorder of their moral faculties, of which curious fact he gives the following striking illustration: "Some years ago, Juan Antonio Garcia, aged between 35 and 40 years, was executed for murder at Buenos Ayres. He was a person of some education, and rather remarkable for the civility and amenity of his manners; his countenance open and his disposition

generous. When this *vento norte*—the peculiar north wind—set in, he appeared to lose all command over himself, and such became his irritability that during its continuance he was engaged in continual quarrels and acts of violence. Before his execution, he admitted that it was the third man he had killed, besides being engaged in various fights with knives. When he arose from his bed in the morning, he told Sir Woodbine Parish's informant, he was always aware at once of its accursed influence upon him; a dull headache first, and then a feeling of impatience at every thing about him. If he went abroad, his headache generally became worse, and a heavy weight seemed to hang over his temples. He saw objects, as it were, through a cloud, and was hardly conscious where he went. He was fond of play, and if in such a mood a gambling house was on his way, he seldom resisted the temptation. Once there, a turn of ill-luck would so irritate him, that he would probably insult some one of the bystanders, and if he met with any one disposed to resent his abuse, they seldom parted without bloodshed. The relations of Garcia corroborated this account, and added, that no sooner had the cause of excitement passed away than he would deplore and endeavor to repair the effects of this infirmity. The medical man who gave this information, attended him in his last moments, and expressed great anxiety to save his life, under the impression that he was hardly to be accounted a reasonable being. 'But,' he adds, 'to have admitted that plea, would have led to the necessity of confining half the population of the city when the wind sets in.'"

In the correspondence of the poet Cowper, there are very frequent allusions to the effect of weather upon his morbid feelings.

These are some of the external agents which act upon man in the aggregate, which scatter broadcast the seeds of insanity to await the special influences necessary for its development and increase. Are there no corresponding general influences concealed within our nature to which we must take heed; no subjective phenomena which add to the liability of the individual that he shall lose his self-control and reason?

From this interesting inquiry, want of space in this report obliges me to turn reluctantly aside.

I must now glance at the more *specific* influences connected with the personal history of the Individual. The first of these to be noticed, is the influence of age in the production of insanity, or rather of the time of life when the probability is strongest that the various circumstances which contribute to its development will surround the individual. The following table has been carefully compiled from the reports of the Asyls in the United States, in which the ages at admission are specified. In some of these, the sex is not particularized. I have therefore added a column so as to include these cases :

Various Ages.	Males.	Females.	Both.	Total.
Under 20 years of age.....	718	741	225	1684
Under 30 " "	2897	2954	925	6776
Under 40 " "	2690	2614	748	6052
Under 50 " "	1892	1826	545	4263
Under 60 " "	984	974	298	2256
Under 70 " "	457	419	94	970
Under 80 " "	145	129	20	294
Under 90 " "	15	31	.....	46
	9798	9688	2855	22,341

It will be very readily perceived that the cases admitted from 20 to 30 years of age, are by far the most numerous. Drs. Charles Evans and Pliny Earle make the following remarks in support of a similar conclusion :

"European authors upon insanity assert that a greater number are attacked with the disease between the ages of thirty and forty years, than during any other decade of life. We believe this proposition to be untrue in regard to the United States, and that the maximum number in this country is between the ages of twenty and thirty years."

To the same effect our distinguished colleague, the pioneer in psychological medicine in our State, Dr. Awl, states :

"It appears that the largest number of persons become insane between the ages of twenty and thirty years. This differs from European experience, but agrees with observations made in different Lunatic Hospitals in the United States. In France and England, according to the best authorities, the greatest number become derang-

ed between the ages of thirty and forty. This difference may in a great measure depend upon the nature of our institutions and the premature age at which intellect is brought into action in this country."

In this connection it must not be forgotten that if a larger number of persons become insane between 20 and 30 years of age than during any other decade, so also there is an excess of the general population of that age over every other, excepting the period under 20 years. It does not necessarily follow, therefore, that this decade is more favorable to the production of insanity, simply because it supplies a greater number of admissions. To ascertain this point with more certainty, we must estimate both the proportion of those living in the community at the time and those becoming insane. A comparison of the numbers stated in the foregoing table with the general population under each decade, as given by the census of 1850 of the United States, will modify any opinions thus founded. The following are the percentages of the various decades in the general population and among the insane on their admissions:

	Per centage among general population.	Per cent. of admission.
Under 20 years	51.84	7.53
" 30 "	18.56	30.33
" 40 "	13.36	27.09
" 50 "	8.12	19.08
" 60 "	4.90	10.10
" 70 "	2.66	4.34
" 80 "	1.14	1.32
" 90 "	.33	.21
" 100 "	.04	....

Thus, it will readily be seen, that the period from 40 to 50 bears a much higher proportion to the general population of that age than any other, and the comparative influence exerted by the different ages may be stated as in the following order of gravity:

Between 40 and 50	7.00	Between 60 and 70	5.1.
" 30 and 40	6.56	" 70 and 80	3.65
" 50 and 60	6.18	Under 20	.42
" 20 and 30	4.89	Over 80	1.68

This result will be somewhat, but not very materially modified, by taking the age of occurrence instead of the age of admission as the basis of calculation. Wherever it has been practicable to do so, I

have collected from a number of reports, all the cases whose ages, when first *attacked*, are given, and embodied the results in the following synopsis. It is to be regretted that the practice of Superintendents, in reporting upon this topic, has not been more uniform:

Various Ages	Males.	Females.	Both.	Total.
Under 20 years of age	771	710	274	1755
Between 20 and 30	2175	1978	894	5047
“ 30 and 40	1527	1348	635	3510
“ 40 and 50	880	877	379	2136
“ 50 and 60	430	390	169	989
“ 60 and 70	179	111	82	372
“ 70 and 80	46	26	6	78
	6008	5440	2439	13,887

From this we obtain the following results, to which I add the percentage of those living at different ages in the community at large, for the sake of convenient reference:

	Per centage of general population.	Per centage of insane.
Under 20 years	51.84	12.63
“ 30 “	18.56	36.34
“ 40 “	12.46	25.27
“ 50 “	8.12	15.38
“ 60 “	4.90	7.12
“ 70 “	2.66	2.67
“ 80 “	1.14	.56
“ 90 “	.33	....
“ 100 “	.04	

The order of liability at different ages, as deduced from these data, may be stated with sufficient precision by the following formula:

Between 30 and 40	2.04	Between 60 and 70	1.
“ 20 and 30	1.95	Under 20	0.24
“ 40 and 50	1.89	Over 70	0.04
“ 50 and 60	1.45		

This result will not be materially affected by any closer mode of analysis; and it will be seen that while youth and extreme age are alike shielded from many of the causes of insanity, the vigorous portion of life, when “man is in his prime,” is particularly liable to the incursions of mental disease. It remains to be seen how far these conclusions agree with the statistics of other countries, and how far these very conclusions may be modified by the sexes.

Dr. Tuke gives an analysis of the ages of 7,295 persons on admis-

sion into hospitals in different parts of the world. Thus it was found that there were—

Under 20 years	619	From 60 to 70	551
From 20 to 30	1682	“ 70 to 80	177
“ 30 to 40	2051	Above 80 years	20
“ 40 to 50	1426		
“ 50 to 60	769		7295

“The general result of this table,” adds Dr. Tuke, “favors the opinion that more patients are admitted (but not necessarily that their disorder originated) between the ages of 30 and 40; then follows in order of frequency, the period between 20 and 30, and next between 40 and 50. The table of admissions at Bicêtre, from 1831 to 1838, is, to a certain extent, in accordance with these results.”

M. M. Aubanel and Thore conclude from the statistics of insanity in Paris, that the age from 35 to 40 exerts a special influence over the production of insanity.

The experience of 44 years, from 1796 to 1840, at the York Retreat, showed that in the greater proportion—one-third of the whole number—the attack commenced between 20 and 30 years of age.

Esquirol arrives at the following results: 1st. “That the ages which furnish the greatest number of insane, are, for men, between 30 and 40; while with women, between 50 and 60. 2d. That the ages which furnish the fewest, are, for both sexes, infancy, youth and advanced age. 3d. That among women, insanity is manifested *earlier* than among men.”

To this question a few observations may not be inappropriate. The following table will enable us to compare the percentage of males and females at the ages when first *attacked*, with the percentage of the same sex living in the general community at the same ages:

Various Ages.	MALES.		FEMALES.	
	Gen. Pop'n.	Insane.	Gen. Pop'n.	Insane.
Under 20	51.01	12.83	52.75	13.05
“ 30	18.65	36.2	18.46	36.36
“ 40	12.86	25.41	11.81	24.69
“ 50	8.38	14.64	7.85	16.12
“ 60	4.97	7.15	4.82	7.16
“ 70	2.64	2.97	2.71	2.64
“ 80	1.11	0.76	1.18	.47
Over 80	.35	.....	.41	.....

I am therefore justified in concluding from these premises—

1. That the greatest *absolute* number of cases occurs between 20 and 30 years of age; but a strict comparison of the cases occurring with the general population existing at the same ages, shows a slightly *increased proportion* between 30 and 40 years; or that mankind, during that period of life, are brought into contact with more causes of insanity than during any other decade.

2. That the least tendency to insanity is shown under 20 years and over 60 years of age.

3. That in *males* the greatest ratio exists between 20 and 40 years; there being but little difference between the two decades—that between 30 and 40 having a very slight excess.

4. That in *females*, between 30 and 40 years furnishes the highest ratio; the next being from 40 to 50; then from 20 to 30 years.

5. That *males*, on an average, become insane at an earlier period of life than females.

SEX.—The influence exerted by the sex of the party upon the age at which the most numerous causes of insanity surround the individual, has already been adverted to. It remains to be determined which of either sex is the more liable to be afflicted with mental unsoundness. Cœlius Aurelianus and Arœteus maintained that men were more liable to become insane than women. In modern times the opposite hypothesis, first propounded by Esquirol, has been supported by a majority of writers upon the subject. Dr. Thurman of York, England, and Dr. Jarvis of Dorchester, Massachusetts, however, agree that Esquirol's conclusions are based upon imperfect premises. Their investigations lead them to the conviction that "males are somewhat more liable to insanity than females."

The statistics of 17 Asyls in the United States, show the admissions to be in the following proportions: Of 38,446 patients, there were 20,233 males and 18,213 females. We must compare this result with the proportion existing between the sexes, in the community at large, before we can arrive at conclusions of any value.

	Per centage of general popu- lation of U. S.	Per centage among insane population.
Males	51.26	5 .65
Females	48.73	47.34
	99.99	99.99

Or, in other words, while in the community at large we find existing 1.05 male to 1 female, we discover among the insane 1.11 male to 1 female.

We may extend this comparison to Great Britain, where there is an excess in the female population :

	Number of pa- tients admitted.	Per centage.
Male	36,044	53
Female.....	31,832	47
	67,876	100

In Norway, the proportion of existing cases to the general population, as ascertained in 1825, 1835 and 1845, is very curious, showing, as years advanced, a gradually increasing proportion of females

In 1825, there were 1 insane to 508½ males, and 1 to 597½ females.
 " 1835, " " 1 " " 322 " " 1 " 345 "
 " 1845, " " 1 " " 318 " " 1 " 301 "

This shows an accumulation of female cases which may be accounted for, in a general way, by the greater mortality which prevails among men than among women. It is supposed that by adopting the *existing* cases merely, instead of the *occurring* cases, as the basis of calculations, Esquirol and others attained the erroneous conclusions already alluded to. The admissions, on which the foregoing table are calculated, represent sufficiently close the number of *occurring* cases.

From all which we may justly infer that *males* are somewhat more liable to be attacked with insanity than females.

CIVIL CONDITION.—The question whether celibacy is not more favorable to mental disease than marriage, receives but slight illustration from the meagre figures I have been able to glean upon the subject from the reports of our institutions.

Condition.	Males.	Females.	Total.
Single	4127	3092	7219
Married	3035	3275	6310
Widowed	336	930	1266
	7498	7297	14,795

I wish to guard the inference which might easily be drawn from this table, by the remark that the excess of *single* persons may be due, in many cases, to the fact of insanity, or more properly to the mental diathesis preceding the outbreak of insanity, and therefore is not uniformly a *cause*, but simply an effect of insanity.

OCCUPATION.—Great caution is requisite in the investigation of the influence of occupation in the production of insanity, and probably less value should be attached to any enumeration of the pursuits of those who enter our Asylums, however accurate it may be, than in those countries where an *occupation* is more distinct and more clearly defined than with us, and where an individual seldom changes his settled business. In such countries, the *occupation* will indicate, with tolerable certainty, the habits and culture of the individual. With us, men not only repeatedly change from one occupation to another, but it is almost impossible to arrive at any thing like an approximation of their cultivation, their intellectual force or the psychal influences which surround them, from a mere knowledge of their daily avocation. Nor does it furnish any better evidence of the social and pecuniary standing of the party. Comfort and competence are the characteristics of none, but may be found in all employments. Bearing these considerations in view, the following table may not be without some interest, at any rate as a means of testing the accuracy of certain very prevalent notions on some points. The first column gives the numbers engaged in the different occupations, as I have gathered them from the reports of 17 institutions of the United States. I have classified them, for the sake of convenience, in the manner adopted in the census of 1850. In the second column, their ratio in the hundred is calculated, and in the third, the percentage of the same class is worked out from the numbers given by the census of 1850. Any one who feels an interest in the subject, can thus easily draw the relative proportion of each class among the insane or sane population. Males only are included.

Occupation.	No. of each class among the insane.	Percentage of each among the insane	Percentage of each among the general community.
1. Engaged in commerce, trade, manufactures, mechanic arts and mining	3976	34.05	29.72
2. Engaged in agriculture	3631	31.09	44.69
3. " in labor other than agricultural .	1906	16.32	18.50
4. " in army	34	.29	.1
5. " in sea or river navigation	314	2.69	2.17
6. " in profession of medicine	209	1.79	.82
7. " in " " law	134	1.15	.45
8. " in " " divinity	127	1.09	.50
9. " in other pursuits requiring education	725	6.21	1.71
10. Engaged in civil or governmental service	29	.25	.46
11. " in other occupations	96	.82	.84
12. " in no occupation	403	3.45	....
13. " in occupation not ascertained ...	93	.79	....
Totals	11,677	99.99	99.96

Many Superintendents of Asyls, believing that statistics are of little value in illustrating the subject of insanity, do not report the occupations of the patients they receive. This is particularly the case with most of those in New England. In all probability, if these were included, the proportion of persons engaged in commerce, manufactures, etc., would be greatly increased. So with regard to the army and navy, the Government Hospital at Washington, not included in the above enumeration, would doubtless furnish additional numbers belonging to both. So that most probably the proportion of these classes would be high to the whole number employed. Even with the very meagre sources from which the information has been derived, the ratio is equal to that of any other class. As far as any deduction can be safely drawn from this table, it militates decidedly against the theory that *farmers* are especially liable to become insane—a theory which has received support from the great number of that class found in every Hospital, in comparison with those of any other single occupation. In every hundred cases, we find 31.09 farmers, and only 1.79 medical men, or 1.15 lawyer. If we follow the comparison still further, the contrast is still more striking. Thus, about 5 merchants or 2 tailors will be included. But this great preponderance is to be expected; for, in the community at large, *farmers* nearly equal in numbers all other occupations combined. The foregoing

table will show that a greater liability to insanity exists in *commercial pursuits*, the ratio of which, among the insane, exceeds, by one-seventh part, what obtains in the general community, while professional life (including the three distinct professions only) is three times more numerously represented among the insane population than in the general population. This result is opposed to the statement of Sir Andrew Halliday, that insanity prevails more in agricultural than in manufacturing communities; and also to the conclusions arrived at by the Superintendent of one of the institutions in this State.

We now approach a subject of deep interest, upon which much has been written and much controversy engendered. For men have differed, and will probably continue to differ, as to the special agencies concerned in the production of insanity, and adhere to views suggested less by any mass of testimony that could be adduced in their favor than by their own mental proclivities. Hence, in all ages, the *causes* of insanity have received attention from observers whose theories have equaled in numbers the observers themselves. Were it not for the sad consequences that have ensued from many of the opinions gravely promulgated, we might find a fund of merriment from looking over a collection of the hypotheses of both ancient and modern writers upon the causes which tend to the disorders of the mind. The Greeks maintained that Ajax was smitten with madness by the Goddess Minerva. To the anger of the offended Almighty has this great affliction been attributed by men neither ignorant nor fanatic. Dr. Burrows says, "Madness is one of the curses imposed by the wrath of the *Almighty* on his people for their sins." To such opinions may be credited much of the treatment the insane received in past—I wish I could add, remote—ages, when chains, footlocks, revolving chairs and systematic flogging, were adopted as aids to cure, as well as means of promoting effectual repentance, by which alone improvement was to be expected. Few men, I suppose, will advocate this doctrine in its gross form at the present day, yet a little reflection will show that reasons no more philosophical are constantly adduced by ordinarily thinking and observant men, to account for the origin of insanity in certain cases occurring within their cognizance. In no

department of clinical observation is the *propter hoc* more frequently confounded with the *post hoc*. This will be very evident in any review of the causes *assigned*, as given in the reports of any institution; and in estimating the value of statistics on this subject, we must always bear in mind the tendency to this kind of error. A too great reliance upon the results of these tables, is certainly to be deprecated, for, without strict scrutiny, they will very probably mislead the inquirer. What the Superintendent of the Provincial Lunatic Asylum at Toronto, Canada West, has humorously remarked concerning that country, may apply, in its general accuracy, to other theatres of action. After quoting numerous *causes* which had been assigned in the cases admitted into that institution, he adds:

“Now, if any one of the preceding wide-spread agencies may be regarded as adequate to the overthrow of reason, how many lunatics should this Province contain? Intemperance alone would people fifty asylums as large as our present one. Jealous husbands and wives would probably fill thirty. Bad treatment of husbands would equal intemperance. Political excitement would tenant a mad-house in every county, and one of superior class and size in the metropolis. Religious controversy would send in half the *clergy* of this Province, and large detachments of their congregations. Tobacco and slander would leave few in Canada at large. Excessive study, solar eclipses, love, inhalation of laughing gas, and remorse of conscience, would probably make up but a small aggregate. In 651 cases of lunacy admitted by me into this asylum, I have met with only one instance in which the last named agency was alleged as the cause, and the patient had not been very wicked. Religious excitement and religious despair both come in for their full share of censure, and yet we meet with few cases in which either can be regarded as purely causal.” (Report for 1858.)

This view of the subject is not to be ignored, and yet there is another point to be taken into account also. What are charged as the causes of insanity, are oftentimes connected with its development in the order of precedence. They may indicate the circumstances which surrounded the patient about the time he became insane, and afford therefore a clue to the particular class of causative agencies to which

his condition may be attributable. To record them, then, serves the useful purpose, that from the history of the patient, we can (so to speak) explore the weak points in the citadel where the enemy effected an ingress. An illustration from another class of diseases may better show this position. A lady with *carcinoma uteri*, had, before the disease appeared, been laboring under great anxiety concerning a near and dear relative, then absent from her, and in great peril. Under these circumstances, the symptoms of disease were first discovered by her. They had in a short time rapidly advanced. In her mind, and in the opinion of her friends, the connection of the mental disquietude and the occurrence of the disease, was regarded as very close, perhaps that of cause and effect. Nor was this very unnatural in her case. Now, no one would undertake to say that grief and anxiety produced *cancer*; so, also, none would fail to see how important it was that they should be taken into consideration as elements in the etiology, how the knowledge of their existence would explain many facts, otherwise obscure—how they accelerated the advance of the disease itself by their depressing influence—what important part they must play in the future management and history of the case. Other examples will readily occur to all reflecting men, in whose practice cases somewhat similar have doubtless occurred. For the light which they thus reflect upon the history of the prodroma of insanity, the *assigned causes* may be regarded as of interest, if the deductions drawn from them be cautiously received.

There is still another difficulty. Assuming the statement of causes to be correct, do they act as predisposing or exciting causes? The line between the two classes is very faintly traced and exceedingly hard to be discerned. A train of disordered emotions may predispose, in a certain case, to insanity, which may be excited by some slight physical evil. In other cases they may be reversed in their order. The table hereafter given, undoubtedly contains both classes promiscuously. We must form our own judgment from the probabilities as to the series they belong to. Nor must we forget that, in the great majority of cases, a combination of both classes of agencies is requisite for the overthrow of reason. "The popular tendency," says Dr. Ray, in one of his reports, "to refer every case to some

particular cause, springs from a very superficial knowledge of the disease. Seldom, in fact, is it produced by any single incident or event. It requires a combination of adverse influences, each of which contributes to the result, though we may be quite incompetent to determine precisely the share which they respectively take. In using the term, *cause of insanity*, therefore, we mean to designate, not some particular incident having in itself the power of producing the disease, but rather one holding a prominent place in any combination of incidents more or less directly followed by insanity ;” and the judicious Esquirol remarks : “ This combination of physical and moral causes is much more frequent in the production of insanity than the isolated action of either of them.”

In the following table I have endeavored to classify the different agencies assigned as the causes of insanity in the reports of 17 hospitals for the insane in the United States. I have condensed them under a few leading heads, and in doing so may have made some errors. That every-body would concur in the appropriateness of the class for the individual cause where I have placed it, I do not expect. To err in such a task is very easy, and to include, in tolerable limits, 111 distinct physical causes and 79 moral causes, gleaned from many documents, required no little care. I think no material errors have crept in. Both physical and moral agents are comprised in the following table :

PHYSICAL CAUSES.		Males.		Sex not specified		MORAL CAUSES.		Males.		Sex not specified.		Totals.	
			Females		Totals.				Females		Totals.		
1	Ill health of various kinds, . . .	813	1395	1502	3710	1	Grief from loss of friends, etc.	203	542	433	1178		
2	Zymotic diseases,	78	96	69	243	2	Anxiety and care,	214	190	170	574		
3	Sporadic diseases of uncertain seat,	3	8	...	7	3	Domestic difficulties,	198	474	440	1112		
4	Diseases of nervous organs, . . .	366	173	204	743	4	Business perplexities,	258	49	226	533		
5	“ of respiratory “,	23	36	1	60	5	Loss of property,	228	63	48	339		
6	“ of circulatory “,	4	3	3	10	6	Disappointed expectations, . . .	28	29	172	229		
7	“ of digestive “,	35	69	27	131	7	“ ambition “,	22	12	14	48		
8	“ of urinary “,	2	1	...	3	8	“ affections,	136	154	195	485		
9	“ of generative “,	15	1383	...	1398	9	Ill treatment, persecution, etc.	12	96	4	112		
10	“ of locomotive “,	4	4	...	8	10	Fright and fear,	80	98	60	236		
11	“ of integumentive org's, . . .	8	9	22	39	11	Religious excitement,	395	427	577	1399		
12	Old age, decay of,	25	17	1	43	12	Political,	28	6	1	35		
13	Results of violence,	184	45	130	359	13	Excessive study & application, .	184	38	355	577		
14	Diseases of eyes and ears, . . .	5	1	...	6	14	Indolent habits,	125	6	...	24		
15	Exposure to sun, heat, cold, etc.	60	11	2	73	15	Religious novelties,	33	103	59	287		
16	Intemperance,	1184	117	463	1764	16	Jealousy,	9	47	27	107		
17	“ in use of tobacco,	26	20	23	69	17	False accusations, etc.,	3	4	2	15		
18	“ in opium,	10	21	8	39	18	Mortified pride,	3	5	1	9		
19	Masturbation,	629	53	360	1012	19	Imprisonment for crime,	10	...	...	10		
20	Excessive bodily labor,	78	78	...	156	20	Defective training,	25	26	15	66		
21	Destitution,	10	28	5	43	21	Homeliness,	8	17	5	30		
22	Loss of sleep,	41	27	23	91	22	Seduction,	...	43	...	43		
23	Change of life,	...	127	...	127	23	Remorse,	3	7	1	11		
24	Want of exercise,	10	2	...	12	24	Pleurisy,	3	...	...	3		
25	Excessive pain,	4	...	...	4	25	Cellulacy,	2	4	...	6		
26	Use of quack medicines,	5	...	...	5	26	Anticipation of marriage,	...	1	...	1		
27	Excessive use of medicine, . . .	3	1	...	4	27	Unfit marriage,	4	2	...	6		
28	Necrosis,	...	...	1	1	28	Excess in light reading,	4	5	...	9		
29	Deficient Nutrition—Grahamism	...	...	1	1	29	Sudden accession of fortune, . .	3	...	1	4		
						30	Joy,	...	...	...	1		

30	Change of habits of life	...	...	...	6	6	31	Fortune being told	...	1	...	1
31	Effects of cantharides	...	...	...	1	1	32	Enthusiasm	...	1	...	1
32	" of ether	...	...	...	2	2	33	Strike for wages	1	...	...	1
33	" of chloroform	...	...	...	1	1						
34	Somnambulism	...	1	...	...	...						
35	Drinking cold water	...	...	...	1	1						
	Total physical causes	3626	3721	2855	10,202			Total moral causes	2237	2448	2807	7492
								Not ascertained	1837	1504	1780	5121
								Physical causes	3626	3721	2855	10202
								Moral	2237	2448	2807	7492
								Not ascertained	1837	1504	1780	5121
									7700	7673	7442	22,813

I have added all cases where "hereditary transmission" * is assigned as the sole cause, to the unascertained. Congenital cases I have excluded from the list. The results of the 22,815 cases included in the analysis, may be stated as follows:

Physical causes	44.72 per cent.
Moral "	32.82 " "
Unascertained.....	22.44 " "
	99.98

Or a little more than four-sevenths of the whole number, are ascribed to the influence of physical agencies, and somewhat less than three-sevenths to moral causes, if we work simply with those in which causes were assigned. This result is also affected by the sex to some extent. Thus among males:

Physical causes	47.09 per cent.
Moral "	29.05 " "
Unascertained.....	23.85 " "
	99.99

Or somewhat over three-fifths are due to physical, and somewhat less than two-fifths to moral causes. Among females, *three-fifths* belong to physical, and exactly *two-fifths* to moral causes, the disproportion being somewhat less than among men. The percentage among the women is as follows:

Physical causes.....	48.62 per cent.
Moral "	31.88 " "
Unascertained.....	19.47 " "
	99.97

Let us compare these results with those obtained by observers in other countries. The statistics of the York Retreat for 40 years, show that the physical causes exceeded by 18 per cent. the moral.

The census of lunacy in Ireland for 1851, give 954 physical and 847 moral causes.

Aubanel and Thore report 7460 cases, of which 4631 originated in physical, and 2829 in moral causes.

* I have avoided all discussion of the influence of hereditary tendencies in the causation of insanity. The statistics on this subject are very meagre and unsatisfactory, and difficult to collate. In my next report, I may discuss this question.

Dr. Take analyzed 29,769 cases admitted into various asylums in England, France and America, and found three-fifths referable to physical, and two-fifths to moral causes.

The opposite view, that the moral greatly exceed the physical causes of insanity, is the more popular doctrine, and has the high sanction of distinguished authorities.

The reports of Bethlem Hospital record 980 from *moral*, to 571 from physical causes.

M. Parchappe, from an analysis of 976 cases, places *moral* causes at 67.1 per cent. ; and M. Guislain at 66 per cent.

Esquirol gives tables of cases, attributing 730 cases to *moral*, and 490 to physical causes. He gives a decided opinion that "Moral causes are much more frequent than physical."

Pinel, from the observations of five years, concluded that cases of insanity produced by moral causes, were, to those occasioned by physical causes, in the proportion of 464 to 219.

The opinions of such men are entitled to the most profound respect. Their impressions, gained during a long and observant experience, must lead us to scan very minutely and strictly the data upon which the conclusions opposed to those which they arrived at are predicated. With all allowance, however, for the errors of judgment which may vitiate the details of the tabular statement I have compiled, I am still satisfied that the general result deduced from it will not be impeached by more extended or more rigid observation, and it may be safely asserted that "the physical causes greatly preponderate in the origin of mental disease."

A rapid survey of the special classes of causes, comprised in this table, remains to be made.

Of the PHYSICAL CAUSES, the greatest number is returned under the vague and unsatisfactory term of—

1. *Ill health of various kinds*.—3710 cases are said to have thus originated. Of these, in 1502 the sex is not specified. 813 men and 1395 women, or 4 men to 7 women, became insane from this cause. Doubtless many diseases included in the other classes are returned under this name, for which due allowance must be made ; but a majority may be said to labor under that phase of diseased condi-

tion, which passes under such names as "general debility," "liver disease," etc., and in which, while no organ presents evident signs of disorder, the whole system seems involved in the trouble. Listlessness, languor, low nervous symptoms, and, above all, disturbed, unrefreshing sleep, are the more prominent symptoms. Usually but little attention is paid to this stage of disease, though analogous states of the system usher in a variety of chronic and fatal disorders. Sir James Clarke has drawn especial attention to this general manifestation of depressed vitality in the incubation of pulmonary consumption, before the evidences of local lesion can be obtained, and the more recent discoveries of the nature of the obscure chronic diseases characterized at the commencement, by similar symptoms, made by Dr. Bright, respecting the kidney, and Dr. Addison regarding the connection of lesion of the supra-renal capsules with the "bronzed skin disease," indicate that this condition is very often, if not always, allied to some difficulty in the retrograde metamorphoses—some want of proper proportion in the excretions, and in general terms, that nutrition is defective. The channels by which this impaired nutrition reaches the brain are not clearly known, whether by disorders of the sympathetic nervous system, which may be probable, or by degenerative influences of the blood-vessels thus induced, as in some cases where atheroma of the cerebral vessels has been traced; in either case imperfect nutrition of the nervous organs occurs—a pathological condition of some portion of the nervous centres is set up, of which the mental disorder is but the indication. Why it should affect the brain more than the lungs or the liver, etc., or why it should affect, as doubtless it does, the nutrition of one part of the brain substances more than the others, are questions which cannot be satisfactorily resolved, until we know why several persons exposed to the same influences should be affected injuriously in different organs; why cold should attack the pleura in one, the kidneys in another, or the joints in a third; or still more mysteriously, why rheumatism should prevail in the elbows of one man and in the knees of another. The large excess which appears in women whose insanity originates from "ill-health," would suggest that something peculiar to their condition or circumstances underlies the extraordinary phenomena. I avail my-

self of the graphic pen of Dr. Ray to trace the source of much of this evil. After describing this condition of "ill-health," as "a state of the system characterized less by any local affection than by a loss of physical and mental power, and by a host of uncomfortable sensations," he adds: "The form of the disease in question, arises, in a great degree, from excessive domestic labor, in conjunction with bad diet, bad air, insufficient recreation, and, in married women, frequent child-bearing. Of course it is confined to the classes that are obliged to give much of their attention and strength to the performance of domestic duties. It may, perhaps, require to be explained why insanity should be more prevalent here than it is in other countries among the corresponding classes which are supposed to be subjected to similar influences. The latter unquestionably work hard and fare hard, but they start with a stronger constitution; they are much in the open air; they live on plain food, and move in a social sphere that bounds all their wishes and aspirations. Here, however, the woman enters upon married life with a constitution somewhat delicate, rather with little physical training, or one perhaps severe enough to have consumed no small portion of her physical power. Ambitions that her house and family should be distinguished among her neighbors by all the indications of good management, but unable to indulge in hired service, she labors beyond her strength, and does nothing towards restoring it by suitable relaxation. The cares of an increasing family, without increasing pecuniary means, seem to forbid the slightest rest from the daily routine of toil; her duties are all within doors, in overheated apartments; while a certain regard for appearances and a perpetual straining after a higher social sphere, give rise to an uneasy, if not repining state of mind. At last, the appetite fails, less and less food is taken into the stomach, the nervous system becomes irritable under the slightest impression, the sleep is diminished, the flesh reduced, and the mind is depressed by unaccountable gloom and apprehension. The end is now at hand in the shape of unequivocal insanity, from which recovery is tedious at best, and often hopeless." (*Sixth Report of Butler Hospital*, 1854, p. 26.)

2. *Acrotic Diseases*.—In this class are included 57 cases from diseases supposed to be connected with malarious influences. The eti-

ology of these is itself obscure, and equally or more so is the mode by which they affect the brain. That they do however accomplish this is susceptible of proof. *Typhoid fever* furnishes 135 cases—22 without the sex being specified—leaving 53 men and 60 women. This number is probably rather under than over the mark. Disturbance of the mind is not a very unfrequent accompaniment of typhoid fever. Dr. Flint has noted that delirium more or less marked all the cases of fever under his care, excepting a few of very slight gravity. “It is very rarely the case,” says he, “that the faculties of the mind remain wholly unaffected during the career of continued fever.” As the patient convalesces from the fever, the mind usually arouses from its hebetude or gradually throws off the delusions which harassed it, but this is not always the case. The mental habits are perpetuated by some agency beyond our means of actual proof.

3. *Diseases of the Nervous Organs.*—This includes 14 cases of apoplexy and 101 of paralysis, 57 of which were males and 35 females. Respecting the rest, 22, the sex is not mentioned. The course of these diseases, aside from the period after consciousness has been resumed, does not always involve mental aberration. They may recover gradually from the attack, or some loss of motion or sensation may result. In other respects, their powers appear unaffected. But when this is not the case, when the effusion (whatever it was) is not thoroughly resorbed, or the fibres have not renewed their continuity, or have imperfectly done so, it is probable that an exudation still remains to embarrass the brain, while the arterial capillaries may be plugged or the structure of their walls modified, in either of which cases the reparation of the brain is imperfect. 511 cases are traced to *epilepsy*, the connection between which and insanity and its own pathology, I frankly confess I know nothing about. Two facts are however indisputable. Epilepsy does not necessarily induce insanity, but a large proportion of epileptics become deranged. Esquirol noticed that of 300 epileptic patients at the Salpêtrière, upwards of 150 were insane; the same proportion was returned at Bicêtre and Charenton.

4. *Respiratory Organs.*—Phthisis is credited with 35 cases, 16 males and 19 females. Bronchitis operated in similar manner in 2

men and 13 females. Esquirol quotes the opinion of Hippocrates respecting the connection of the checking of the expectoration of phthisis and the wandering of the intellect, and adds, "that phthisis causes, or at least precedes mental alienation and alternates with it." Dr. Bucknill, in an article in the British and Foreign Medico-Chirurgical Review, thinks that phthisis very rarely causes insanity. That they coëxist in many cases, will be admitted by all who have had charge of many insane persons, and that the pulmonary symptoms are masked to a greater or less extent, is also true. This may account in some degree for the non-recognition of it in its early stages. *Pneumonia* is noticed as productive of 4 cases only. From my own limited observation I had thought this was more frequently the case. Certainly the proportion of cases succeeding this disease which have occurred within my own observation, has been much larger than statistics indicate.

5. *Circulative Organs*.—Five of this class resulted from excessive loss of blood, four from disease of heart, and one from aneurism of aorta. In the diseases of the organs of circulation, we must expect some disturbance in the circulation itself, and probably more or less exudation from the capillaries in consequence. Where this occurs within the cranium and impinges upon the gray matter, or remains there a foreign substance, as the focus of irritation, the development of insanity may be easily accounted for. Moreover, this same condition of the heart or the large blood-vessels may in similar manner, by irregular or vitiated supplies of blood, impair the nutrition of the brain substance and destroy the beautiful equilibrium constantly maintained during health between waste and repair, incrition and excretion. This change is sufficient to precipitate an attack of insanity.

6. *Digestive Organs*.—The numerous and protean forms of digestive derangements exercise an important role in the overthrow of reason. So much have diseases of the abdominal viscera been connected with the development of insanity, that the great Pinel conceived that it usually depended upon disease of the stomach.* Indi-

* He refers the primitive seat of mania "to the region of the stomach and intestines, from whence, as from a centre, the disorder of the understanding is propagated by a species of irradiation. A feeling of constriction, etc., manifests itself in these parts, soon followed by a disorder and trouble of ideas." *Mental Alienation*, p. 20.

gestion occupies a high place in our list, 128—34 males, 68 females, and 26 sex not stated. The term is a vague one—a symptom being used as the description of the disease; and without much impropriety these cases might have been added to swell the numbers from “ill-health.” As they were separated in the reports of the Institutions I consulted, I assigned them their present position. What has been remarked with reference to the influence of “*ill-health*,” being also applicable here, we need not be longer detained on this subject.

7. *Of the Urinary Organs* only 3 cases are given, and they are, nephritis, 2 males and 1 female. The absence of mental alienation when calculi are present, has been alluded to by many authors, and they seldom, if ever, figure as the causes of insanity. Still I am not sure that diseases of the kidney itself and of the urinary apparatus in general have received their full share of attention in this respect. I shall however allude to this topic on another occasion, and therefore pass to notice—

8. *Of the Generative Organs.*—The most prominent causes in this class are those connected with the puerperal condition, of which 1050 are noted, while 8 were in consequence of miscarriages, and 24 from over-lactation. This subject is too important to be disposed of in the brief notice my limits would admit of in this place, but I may remark that a special investigation of this subject has enabled me to arrive at the following result: of 11,762 reported insane women in the United States, 1050, as above, occurred during the puerperal periods, or nearly 1 in every 11. To this I have added from various sources the following:

Authority.	Number of insane females.	Puerperal cases.
American Asyla.....	11,762	1,050
Reported by Dr. McDonald.....	691	49
“ “ M. Parchappe.....	596	33
“ “ M. Lellier... ..	97	11
“ “ Hanwell Asylum.....	703	79
“ “ M. Mittivié.....	242	9
“ “ M. Esquirol... ..	1,119	92
“ “ Bethlem Hospital.....	899	111
	16,109	1,434=8.9 per cent.

or 1 to 11 insane women. The experience of Esquirol and other

observers, derived from private practice, places the ratio much higher than this.

Uterine diseases and menstrual irregularities form the larger proportion of the balance in this class. Nor will this surprise any who are familiar with the ordinary history of uterine derangements. Few cases, however slight, of ulceration of the lips of the womb, of amenorrhœa or of menorrhagia, especially when leucorrhœa is excessive, pass through the stages of their condition without more or less mental disturbance. It may depend upon the extent of the disease, or upon the force of the mind, and the volition, how far this shall be carried, but I doubt whether a single instance ever occurred of derangement of the female sexual organs without more or less corresponding trouble of the mind, and especially of the emotions. There is always a marked tendency to "mental involution," if I may coin a phrase, to project exaggerated emotional and instinctive phenomena, to brood over, and by brooding to magnify minor evils, to loose the control of the judgment over the temper and feelings; in a word, there is always a relaxation of the power of the will, the essence and characteristic of hysteria. How is this intimate relationship kept up between the generative organs and the brain? Sympathetic action is the ready answer; but the term simply describes the fact, does not give any explanation of the mode by which that becomes an accomplished fact. The difficulty arises from the rapidity with which a disorder of the uterus excites an abnormal action of the brain. There seems no appreciable interval of time between the two. "Dr. Denman passed a ligature round a polypus of the fundus of the uterus; as soon as he tightened it, he produced pain and vomiting. As soon as the ligature was slackened the pain ceased, but whenever he attempted to tighten it, the pain and vomiting returned. The ligature was left on, but loose. The patient died about six weeks afterwards, and on opening the body it was found that the uterus was inverted, and that the ligature had included the inverted portion." I cannot offer any explanation of the process, but express my belief in the rule that lesions at the extremities of nerves, are very liable to disturb the process of nutrition at the centres, and that the disturbance of the central functions thus set up may be prolonged, after the

peripheral cause has been removed. This is the case in tetanus oftentimes—in the diseases of dentition—in the effects of worms in the intestines.

But there are also other modes in which various sexual disorders may affect the nutrition of the brain. These I have only time to point out. In ammenorrhœa, the force, circulation, and possibly its constituents, become involved. This may affect the system generally, but following that mysterious law of "election," it may select the brain, in many cases, in which to expend its force, as we know it does in other organs; so in leucorrhœa, when it is persistent, it is not to be imagined that the pyogenesis which may have been established by a local lesion, is capable of being confined in its effects to any one portion. A blood poison thus engendered is not to be dammed up in the vessels of any part. It finds for itself a weak spot to attack, unless it can be eliminated by the appropriate excretory organs as fast as it accumulates. In one case insanity was noted as the effect of the first catamenial discharge. This result has been alluded to by Hippocrates.

In this connection (although not included in this category), we may allude to the fact that in 127 the change of life is stated as the cause of the attacks. Although this is of course a physiological change, it nevertheless so often marks the period of development of very grave diseases of the uterus and other organs—the appearance of carcinoma therein—tuberculosis—fibrous growths and other systemic changes—that to extend its influence to the nervous centres by modifying their nutrition, is neither impossible nor improbable. These cases also correspond to the class of diseases which have their origin at a similar period; they are usually incurable.

9. *Old Age*.—The irregular decay from advancing old age, may be a cause or it may constitute the disease itself. It may affect other organs and leave the brain comparatively unharmed. A Humboldt, at his advanced age, has his mental vision undimmed, though the failing body lagged behind the requisitions of the powerful mind. But with many it is far different. As the Indian apostrophized himself, "He was decayed like a lofty elm—the top boughs were fading and decaying, but the lower branches were still green and fresh." So,

with advancing years, the mind passes into swifter decay than the other powers.

10. *Violence*.—A large proportion of these were attributed to injuries of the head, of which 288 are collected—143 males, 25 females, and the sex of the rest was not stated. Molecular change, it is probable, occurs in these cases, followed by atrophy and degeneration, probably of an albuminoid nature, in a somewhat analogous manner to the wasting away of the testicle from blows. *Three* cases are given, produced by lightning stroke. The changes seen after death from lightning stroke, have generally been referable to the composition of the blood. When death does not immediately ensue, it is not improbable that similar alterations occur in the vascular system in a less degree.

11. *Exposures* to sun, heat and cold, to fumes of charcoal, etc., are causes well known in the production of mental disease. Dr. Kane, in his *Arctic Voyages*, gives a very vivid illustration of the effects of long-continued cold and exposure in rendering a party of his men delirious and maniacal.

12. *Intemperance*, occurring as the cause in 1764 cases, has been so often dwelt upon in this connection, that I need not add any thing to the many homilies given on this painful subject, further than to suggest that, while it operates as a cause in numerous cases, it also is sometimes found as a symptom and effect of insanity. The two classes are to be carefully distinguished. Of course, habitually or frequently over-stimulating the brain by strong drink, will cause many morbid and anomalous phenomena. They may be far from insanity, considered by themselves, but they form a train of circumstances in the series of events, the last of which is the overthrow of the reasoning faculties.

13. *Masturbation* is stated to have been the cause in 1042 patients. That this evil is of great magnitude, no casual observer in any of our hospitals will doubt, after witnessing the woe-begone countenances, the lack-lustre leering, and the libidinous, shameless experience of those inveterate cases which they will meet in the wards. It usually blights the prospects of the most amiable youth of our country, who often pass among their friends as models of propriety, and in whom

many fond hopes were centred ; those in whom no previous reckless temper had been developed, and indeed in those whose *public conduct* had been most circumspect and moral. Usually, the character is rather of a negative order, characterized by the absence of very marked features for good or bad

The remaining causes enumerated, are marked as having but slight effect, and many of them apocryphal.

No serious argument is necessary to show why "drinking cold water" is not a moving cause of insanity, and grave doubts may be felt as to the influence of chloroform, ether and cantharides. The use of quack medicines, and the excessive use of medicines, might rather be regarded as indications of insanity than causative agents in its production. On the contrary, *loss of sleep*, to which are charged all cases, doubtless contributed much more largely than these notations would indicate. I shall have occasion to refer to this in treating of the moral causes.

MORAL CAUSES have popularly been regarded as the most prolific source of mental disorder. That they are largely concerned, as part of the combination of circumstances which together thus act, there can be no doubt. That they often appear to be the most prominent member of this combination, is also certain. But still, their precise share in the transaction has not been fully determined, even by the most strenuous advocates of their preponderating influence. Assuming as true, that morbid mental manifestations denoting insanity, only occur in conjunction with structural alterations of some portion of the nerve centres, and in consequence of some morbid condition consequent thereon, it remains to be shown how far purely psychical phenomena can produce such changes.

The following two propositions will probably cover the whole ground:

Very powerful moral agencies can produce such cerebral changes without any other cause.

This is not the usual mode, however, by which moral causes act. They more generally set in motion or concur with a train of physical disturbances, through which the cerebral changes are in turn effected.

These propositions do not contradict the dogma that insanity never results from the operation of moral causes without some physical departure from health.

By the first proposition, we suppose the effect of moral causes upon the brain to be *direct*. Emotions wrought upon to an exceptional degree, will occasionally expend their force in this direction to the production of insanity, without any intermediate agency. The same influence is seen in other portions of the body. The injurious effect of anger upon the milk of nursing women, and the rapidity of its operation, are well known. How the bladder is affected by the emotion of *fear*, is well illustrated by the soldier on the eve of battle, and by the medical student about to enter the examination room. That the brain is also affected by similar causes, instances are not wanting to show, though the result is more often active inflammation of the brain than insanity. Of the latter, the following case, reported by Dr. Skae, of Edinburgh, is the best authenticated example I have ever read of, of insanity resulting in this way: A "female, who had been born and spent all her life in the lonely island of Uist, the *ultima thule* of Scotland, came to Edinburgh to visit her friends, and unfortunately arrived at the time of a great Masonic procession. She was dragged through the streets of Edinburgh by her kind friends for several hours, to witness this grand pageant, and the excitement to the poor young woman, who had never before seen any thing but Shetland sheep and ponies, proved so great that she was brought to the asylum the same evening in a state of raving mania." A moral cause may be present so overwhelming in its effects, as to prove fatal, or to produce a state of alarming syncope, an utter prostration of the whole system. Recuperation from this state, discovers the mind to be grievously injured, and generally in a state of dementia. In both cases the effect is instantaneous. Thus, the prophet Eli, when he heard that the Israelites had fled before the Philistines, and that his sons had been slain, and that the Ark of God had been taken, fell back dead. The history of the atrocities of Alva in the Netherlands—of Claverhouse and his troopers against the Covenanters of Scotland, furnishes many instances of the mind being utterly overwhelmed by the sudden and fearful trials of those terrible times.

The glowing pages of Macaulay contain a very striking illustration of the same principle. Ornichund, one of the agents of Clive at an important juncture, seemed likely to play false. It was important to keep him quiet, as he had the key to the intrigue, and a word from him could ruin Clive and his coadjutors. He demanded three hundred thousand pounds sterling as the price of his secrecy and assistance. This was promised. "He had demanded that an article touching his claims should be inserted in the treaty between Meer Jaffier and the English, and he would not be satisfied unless he saw it with his own eyes. Clive had an expedient ready. Two treaties were drawn up, one on white paper, the other on red—the former real, the latter fictitious. In the former, Ornichund's name was not mentioned; the latter, which was to be shown to him, contained a stipulation in his favor." After the battle of Plassy, when Clive was secure, and had placed Meer Jaffier on the throne, "the new sovereign was called upon to fulfil the engagements into which he had entered with his allies. A conference was held at the house of Jugget Leit, the great banker, for the purpose of making the necessary arrangements. Ornichund came thither, fully believing himself to stand high in the favor of Clive, who, with dissimulation surpassing even the dissimulation of Bengal, had, up to that day, treated him with undiminished kindness. The white treaty was produced and read. Clive then turned to Mr. Scrafton, one of the servants of the Company, and said in English, 'It is now time to undeceive Ornichund.' 'Ornichund,' said Mr. Scrafton in Hindostanee, 'the red treaty is a take in. You are to have nothing.' Ornichund fell back insensible into the arms of his attendants. He revived, but his mind was irreparably ruined. Clive, who, though unscrupulous in his dealings with Indian politicians, was not inhuman, seems to have been touched. He saw Ornichund a few days later, spoke to him kindly, advised him to make a pilgrimage to one of the great temples of India, in the hope that change of scene might restore his health, and was even disposed, notwithstanding all that had passed, again to employ his talents in the public service. But from the moment of that sudden shock, the unhappy man sank gradually into idiocy (dementia). He who had formerly been distinguished by the

strength of his understanding and the simplicity of his habits, now squandered the remains of his fortune on childish trinkets, and loved to exhibit himself dressed in rich garments and hung with precious stones. In this abject state, he languished a few months, and then died."

Admitting therefore the full influence of sudden and powerful moral causes, in the production of those morbid phenomena on which insanity depends, it must not be forgotten that this is not the uniform nor even the more customary mode by which moral causes produce insanity. They more frequently act indirectly, by setting in train a series of morbid physical processes which terminate in the production of insanity. Less prompt in their action, they proceed in the work of degeneration slowly, but in a variety of ways, only a few of which I shall have time to notice. Or they concur with some physical cause, in precipitating an attack, and this is probably most frequently the mode of their connection in the etiology of disease than any other. "Many are the instances in which numbers as well as individuals have escaped a prevalent disease, until depressed by some unhappy event or apprehension, and then they have fallen victims. Such was instanced in the ill-fated Walcheren expedition, and in many passages in the history of armies in pestilential countries. A defeat, a failure, or even bad news, made many succumb to the pestilence who had before escaped." Every physician can recall from the treasures of his own memory, of a period of cholera or other epidemic, many instances of the effects of fear, grief, and other depressing emotions, in promoting the spread of the disease.

The tendency of long-continued mental operations upon the body is susceptible of varied illustration. The influence of a happy, cheerful disposition to produce a comfortably stout body is proverbial. Nor less so the tendency of peevish, anxious, worrying tempers to be associated with lean, lank, hungry bodies. The emotions of fear, grief and anxiety, from whatever circumstance arising, if long continued, cause well marked departures from the physical health of the individual. The temperature is depressed, the secretions from the mucous membranes are checked, and in short, nutrition is seriously interfered with. Cardiac diseases—dyspepsia and low forms of fever—

are the most frequent sequences. Even in those persons whose power of resistance is strong, a pale, anxious countenance, a decreasing appetite, and a loathing of food, are very often met with. Thus an impaired nutrition is established, sufficient alone to produce an attack of insanity, most probably on account of the spanamic condition of the blood, induced by the imperfect material supplied for the elaboration of cells.

The emotions of anger, revenge, jealousy on the other hand, affect the circulation in a very different point; they accelerate the heart's motion by increase of involuntary muscular action; the tendency to irregular gesticulations and muscular contractions is also increased. Irritability, congestions, hyperamic states, and actual inflammations of various organs, but especially of the brain or its appendages, may result. Thought long-continued, whether from over-study, from the strain upon the attention, from business perplexities, from the *exclusive* study of any one object, may so exhaust the nervous energy as to render it incapable of appropriating proper nutrition, and produce that condition of nervous excitability and hyperæsthesia characterized by rapid impressions without force. In these different directions may moral causes open the avenues to mental disorders. I think it will be found that all or nearly all moral causes may be ranged with one or the other of these classes. Oftentimes more than one of them may be present in the same case.

Where any of these causes have been at work, the recuperative powers which nature interposes to check their inroads, however energetic at first, are gradually weakened, and finally succumb. The chosen defense of the brain is sleep, which, useful to restore the tired and weary frame in every portion, is absolutely necessary for the restoration of the exhausted brain. And for this purpose it must be sound, healthy sleep. This is the last anchor, and when this is gone the poor vessel drifts before the merciless storm, little heeding any helm.

A careful analysis of the experience of those accustomed to treat mental disorders would, it is probable, considerably reduce the numbers of those in whom the disease can be ascribed to a purely *moral* cause, acting even indirectly as we have seen. A larger number of those supposed to be thus derived, would be found to be due rather to

some physical evils, acting or coincident with the assumed *moral* cause. Comparatively a very small portion will remain to be charged to the *direct* action of these agencies. A consideration of a few of the assigned causes of a moral nature included in the previous table will end our discussion of this question.

Religious excitement accounts for 1399 cases, or 18.67 of those ascribed to moral causes. In popular estimation it undoubtedly occupies a prominent place among the causes of insanity. It is very questionable, however, whether the amount of insanity which can be traced to this source is not in reality quite inconsiderable. The first symptoms of mental disease are not unfrequently evinced by some singular or extreme notions of religious truths and duties, or of the relation sustained by the party in his religious character, and these expressions or acts are often confounded by friends with an awakening to the importance of religion, or what is termed a "season of conviction," and subsequent unmistakable acts of insanity are by them attributed to these supposed exercises of the soul; yet in truth a further examination would have satisfied them of the existence of causes lying far deeper than these, and that, in many cases at least, the religious fervor, etc., were perhaps the last efforts of a mind, instinctively feeling itself failing, to reëstablish control over impure and unholy passions. I do not know how the experience of others would teach, but it has happened that the investigation of numerous cases attributed to religious excitement or depression, has led me to the unwilling conviction that they were to be charged, in quite a large proportion of cases, not upon any opinions of religious doctrines—to no deep concern to conform the actions to religious precepts, but simply to a long career of vice, and especially of masturbation, which had been for a long period gradually undermining the integrity of the mind, and the religious enthusiasm, or fear, which attracted attention, was only a *recoil*—an expiring, but abortive effort to reach the purity daily growing more and more distant from their reach. In some cases, the awful terrors of the Law may assume some horrible shape, and fasten, as a delusion, on the judgment, or the mind may project into distinct hallucinations some truths which the memory furnished. They may believe themselves to have unclean spirits; that they hear

angels and their Saviour converse, or that they see them ; that their souls are lost because they have committed an unpardonable sin ; that God directly commands them to do extraordinary acts, and a thousand similar fantasies may gain possession of them, all having a religious association. But this does not indicate, by any means, the *religious origin* of the disease, any more than delusions of any other character. Men think themselves Presidents or Kings ; they rule thousands ; they constantly harangue on political or financial topics ; they buy and sell largely ; they are wealthy as Cræsus, or every thing they see or own is turned by them, Midas-like, unto gold or gold-producing means ; without having been made crazy either by political excitement or business or financial troubles. Equally may delusions of a religious character be entertained by men who, when sane, were never influenced by religious principles, as well as others may mourn their lost condition—their enormous crimes—their deep despair of salvation, who, before disease invaded them, were in every respect exemplary for their Christian demeanor. To charge upon religious exercises such results, in these cases, would be no more philosophical than to mistake for medical philosophy the exquisite humor of the gentle “Elia,” when he elaborately describes the *melancholy peculiar to tailors*, and learnedly traces its origin to their errors of diet—their devotion to cabbage ! So, also, where the origin of the disease can actually be traced to a time when the patient experienced deep religious interest, it is not unfrequently to be ascribed less to any overpowering effect upon the mind of any doctrines or ideas, than to some well-marked violations of the ordinary laws of life. A minister at a camp-meeting preached for seven days and nights, taking only broken and disturbed rest, suffering from headaches, until at last he becomes a raving maniac, and continually gesticulates as if rousing the ungodly to repentance with incoherent vehemence. Another, with greater endurance, continued similar services for sixteen days and nights, with a like result. Was it religious fervor that overpowered these men, or was it the over-exertion of the bodily powers—the constant tax on the wearied brain—the terrible tension of the nerves ? These, added to the want of the natural restorative, sleep, are surely sufficient to account for the effects produced. During camp-meet-

ings and revivals, what mental harm results is less from any moral or mental impression produced than from its coincidence with a state of ill-health at the time, or the loss of rest, unnecessarily endured, or other equally erroneous course of conduct. A sound, healthy person may devote his energies to the investigation of religious subjects; he may become deeply interested therein to the exclusion, for a time, of every thing else; he may listen to the discourses of those whose appeals rouse the overwrought emotions to their highest pitch; but rarely, with ordinary prudence, does such a one become insane in consequence of these mental exercises alone. On the contrary, that which directs a man's attention to the most important problem ever to be solved by him—his relation to a future destiny; which attracts him to the contemplation of an example of purity; which turns him from doing wrong to doing that which is right; which changes him from a bad to a good man; which, showing him the errors of a past life, points out the path to be followed in the future;—call this excitement or interest or what you will, it is calculated rather to conserve than to destroy his intellectual vigor. In short, those whose lives are best marked by the quiet, calm and unswerving trust of the sincere Christian, are, other things being equal, best prepared to resist the operation of the multifarious tendencies to mental derangement which beset us all on every hand. Dr. Tyler, in his report, mentions that the very general religious movements in 1858, had produced no cases of insanity within his knowledge, and justly observes thereon: "Whatever, in the experience of the year, has, on the whole, taught men to think less anxiously for themselves, and more kindly and carefully for others—whatever has effectually abated self-conceit, and led to genuine benevolence of thought and deed, has lessened their liability to mental alienation."

In one of the earlier reports of the Ohio Lunatic Asylum at Columbus, Dr. Aul states: "As the result of some attention to this matter, we feel satisfied that the true remote cause of insanity *very frequently lies behind the religious influences* which appear so conspicuous, that, at most, religion can only be accused as the *occasional or exciting cause of a disease whose foundation is completely established in the system.*"

And Dr. Copeland eloquently observes: "Among those who entertain just and sober opinions on religious topics—who make Christian doctrines the basis of their morals, the governors of their passions, the soothers of their cares and their hopes of futurity, insanity rarely occurs. The moral causes of derangement, which would not fail of producing injurious effects on others, prove innocuous in them, for these causes would be met by controlling and calming considerations, and sentiments such as would deprive them of intensity and neutralize their effects. Truly religious sentiments and obligations soothe the more turbulent emotions, furnish consolations in affliction, heal the wounded feelings, administer hopes to the desponding, and arrest the hands of violence and despair." While, therefore, it is not to be denied that undue religious excitement may sometimes aid in the development of insanity, it is submitted that it forms a much less efficient cause than it is popularly regarded, and the cases in actual practice, due solely to this cause, are exceedingly rarely, if ever, met with.

Business perplexities, domestic troubles, loss of property, and other troubles, enter largely into the list of moral causes of insanity. They are all modifications of *anxiety* and *care*, and, no doubt, are very efficient members of the combination of circumstances which precipitate an attack of insanity. Yet when we consider the large number who are harassed with business and other trials, who are bowed down by domestic trials, and the small proportion of these who become insane, we cannot avoid the conclusion that other elements must be necessary to give force to these agencies. They must act upon an organization disposed to the disease, either by hereditary taint or by some cause existing but unknown to us, whereby the brain becomes more susceptible to their influence. Various other diseases, it is well known, are developed from these causes.

Grief, fear and jealousy are, perhaps, most prominent, as indirect moral causes, acting, as we have already pointed out. Yet in these, also, other elements, either set in motion by them or present when these began to act, will naturally be suggested by the fact that neither grief nor fear nor jealousy renders all its victims insane. The most cognizable, and perhaps the absolutely necessary element in the case,

is an alteration in the quantity or quality of sleep. When trouble of any kind so operates that sleep is banished, especially when no desire for sleep is generated, the brain, which is the organ of all others the most dependent upon the recuperative powers of sleep, is rendered very liable to attack. Nor is it in the absolute want of sleep alone that we may trace this result. Its depravation is almost as bad in its consequences. Unrefreshing slumbers, disturbed by fearful dreams, such as Young alludes to—

“From short as usual, and disturbed repose
I wake emerging, from a sea of dreams
Tempestuous”—

leave the body wearied and the mind harassed and incapable of its proper duties. In a few cases, I have had the opportunity to observe that the attack was ushered in by extreme sleepiness—a desire for sleep unsatisfied by any indulgence—a constant drowsiness, more allied to stupor than the calm repose which nature grants to all creatures in health. All these variations in the character and quality of sleep are worthy of note, for, as a general rule, it may be stated that however much mental or bodily fatigue, however much trouble or grief or anxiety or brooding cares of any kind may be experienced, so long as good natural sleep can be obtained, no great evil will result; but none can with impunity disregard this great law of our existence—the necessity of rest.

“Sleep, that knits up the raveled sleeve of care,
The death of each day’s life; sore labor’s bath—
Balm of hurt minds, great nature’s second course,
Chief nourisher in life’s feast.”

In the first report of the State Asylum of New York, at Utica, in 1844, Dr. Brigham emphatically remarks: “In our opinion the most frequent and immediate cause of insanity, and one the most important to guard against, is *the want of sleep*. So rarely do we see a recent case of insanity that is not preceded by want of sleep, that we regard it as almost the sure precursor of mental derangement. Notwithstanding strong hereditary predisposition, ill-health, loss of kindred or property, insanity rarely results unless the exciting causes

are such as to occasion loss of sleep. A mother loses her only child, the merchant his fortune, the politician, the scholar, the enthusiast, may have their minds powerfully excited and disturbed; yet, if they sleep well, they will not become insane. We find no advice so useful to those who are predisposed to insanity, or to those who have recovered from an attack, as carefully to avoid every thing likely to cause loss of sleep, to pass their evenings tranquilly at home, and to retire early to rest."

Curability of Insanity.

How many recover from the effects of insanity? is often asked of the physician, and is a question of vital importance. The answer is not so easy to arrive at. The fluctuations of public and even of scientific opinion on this subject have been very curious and very great. They have nearly touched both extremes. Time was when they who mourned over the insanity of a friend, mourned as those without hope. The disease was regarded as a living death, hardly less dreadful to the sufferer than to those dear to him. This opinion, formed, perhaps, from the results of the ordinary treatment of the insane at that period, undoubtedly also reacted upon the treatment itself, and if it did not instigate, it at least did not repress gross abuses. It enshrouded, as with a pall, heart-rending scenes of cruel barbarity. Over the entrances of those establishments where they were compelled to reside, might have been truthfully inscribed—

"Here hope that comes to all can never come."

The heroic exertions of the benevolent in various quarters of the world; of the Monks of Saragossa in Spain; of Pinel and Esquirol and others in France; of Tuke and Jephson in England; of Parkman and Wyman, and a host of good men and true in our own country, not only ameliorated the condition of the insane, raised them from the standard of brutes to that of suffering, afflicted human creatures, susceptible of care and capable of appreciating kindness and love, of craving and extending sympathy, but also established the other pleasing fact, that the possibility of cure was much greater than had been so long admitted. Enthusiasm rushed to the other

extreme, and it was gravely asserted that nine-tenths of those attacked got well—that insanity was as curable as inflammation of the lungs. Such extreme statements were supported by statistical evidence, and eagerly believed. Acute observers did not fail to discover that the general results of experience did not tally exactly with these statistics, and doubt was engendered as to the value of the numerical method to illustrate such matters. Figures, they urged, could be made to prove any thing. And so it seemed. Yet these accusations, not wholly destitute of truth, were yet unjust; for, if the inferences sought to be drawn from the statistics were untrue, the materials of proof of their unreliability were furnished by the same figures. In fact, the views insisted on, were usually too contracted and partial, and the modes of estimating results were erroneous. Short periods of time, limited numbers, generous deductions, and large generalizations, took the place of great length of time, large numbers, rigid checks, and careful analysis. The cautions of *Quetelet* are very valuable in this as in other statistical questions: “We cannot,” he observes, “be too much on our guard against conclusions drawn from statistical documents, and especially against the methods of reasoning which may be employed. The greatest sagacity is necessary to distinguish the degree of importance to be attached to each influencing element, and we have frequent proofs that even clever men have been led into absurdities by ascribing to certain causes, results produced by other causes which they had neglected to take into consideration.”

Several of these elements, liable to influence conclusions drawn from the statistics of recoveries from insanity, demand a brief notice before we enter upon the propositions indicated by an analysis of such statistics.

At the very threshold of the inquiry, we are met with the apparently simple question—What is a cure? How and when is a cure known to have taken place? A cure is not a fact of an *objective* character, which is recognized without gainsay, and can be counted off upon the fingers. It is essentially *subjective*, to some extent at least, influenced by the mind of the observer and recorder of the event. In some diseases there is no difficulty in the matter what-

ever. The physician considers the patient convalescent—the disturbed functions resume their accustomed work, and the patient fulfils his daily duties nearly, if not quite as well as before he was attacked; and in these cases, society generally acquiesces in the verdict of the physician. Yet a moment's recollection will bring to every body's mind a few instances wherein the physician thought the patient recovered, yet he continued obstinately sick, and thus both he and his friends reversed the verdict pronounced by the physician. Again, one physician pronounces a patient *well*, when the important crises of his sickness have been satisfactorily passed through, although strength and vigor have not yet been acquired; another waits for these before he regards the case as one of recovery. This mental bias of the parties recording the data from which the percentage of recoveries must be calculated, is a very important influence to be taken into consideration in the deductions drawn from all statistics of recovery, and especially, as we shall hereafter see, in those of insanity. The cure of an *insane* man may be established as a *fact* by the opinion of the *expert*, accustomed to judge of such circumstances, supported by the subsequent sane conduct of the individual. In *social statistics*, we must understand by *curing* an insane person, taking him from the *dependent* class of the community and restoring him to the *independent* class to which he formerly belonged. If a man, discharged as cured from the hospital, goes home, requires to be watched and attended, is useless as a producer, and remains so to the end of his days, he cannot be regarded as so transferred; or if he is afterwards consigned to the poor-house, for his inferior mind, by society, there to spend his remaining days, and if, after an apparent convalescence, the return to business renews all the symptoms of the attack, and shorter or longer alternations of mental disease and mental health become the order of his existence; in either of these cases he cannot surely be considered as transferred from the dependent to the independent class of citizens, though his recovery were certified by twenty alienist physicians. Yet, from the very imperfection of statistics, all these circumstances will be represented in the history of many discharged by superintendents of hospitals as cured. The number reported as cured, therefore, simply represents the opinion of

the superintendent or other official discharging and recording the patients—an opinion which society may, and often does immediately reverse, by taking charge, in some form, of the *cured man*; and the verdict of society as to those whom it allows to resume their wonted places in its ranks, is what the statistician (rightly or wrongly in individual cases) must seek as the result of his calculations as to the curability of insanity. The symptoms may simply be repressed, not obliterated, and may start forth in their original force directly the unfortunate man renews his acquaintance with the scenes and duties among which he became deranged. For these circumstances, deductions must be made from any proportion of cures predicated upon the reports of the physicians of the various hospitals for the insane.

Another source of error may be traced in the tables of these reports as contributions to "social statistics:" *the same person may figure therein several times*. He may have had several attacks, and after each have been sent home as being well. Thus, one man is made to represent several men transferred from the infirm class to the self-sustaining. Such statistics, therefore, merely represent the *attacks* recovered from, not the persons who recover; and the statement is still subject to the influences already specified. Bearing in mind these qualifying considerations, we proceed to investigate such statistics as may be within our reach. The Commissioner of Statistics for the State of Ohio, in his report for 1858, among other subjects, devotes some attention to this question. He gives the published results of nine American institutions, in which, of 14,031 discharged patients, 6984 were discharged as recovered, and adds: "The *proportion* of cures, then, in the whole number discharged from treatment, is 50 per cent., just one-half. But if we deduct the deaths, the proportion is 60 per cent." On what principle the deaths are to be excluded, it is not easy to determine. Of course all who do not recover *die insane*, after a shorter or longer period. The exigencies of an asylum require the discharge of those not recovered after a certain time, to make room for more recent cases, but, under whatever character discharged, they will ultimately swell the number of deaths during insanity. The deaths in an asylum afford no clue to the mortality influenced by the insane condition, but simply aid (in a statisti-

cal point of view) in estimating the hygienic and other condition of the special hospital, and afford some aid to the knowledge of the pathological states complicating or attending insanity in general. We conceive, also, that Mr. Mansfield has been unfortunate in the plan he has adopted for his calculations. We do not require the proportion of those who recover compared with those who have been discharged from an institution, but with those who have been admitted therein for treatment. We have no time to enlarge on this topic. It has been pretty well settled by statisticians, who have devoted attention to these calculations. The chief mischief in taking the percentage of recoveries upon the number discharged, consists in the fictitious proportion of cures, and the consequent exciting of hopes that can never be realized. An analysis of such statistics as are within our reach, will show how fallacious is the expectation that half of those who become insane, will recover the ordinary powers of their mind. The periods selected in the history of an institution will influence its statistics very materially, so that, to arrive at an approximate approach to truth, it is necessary to take long periods of time, and also to examine the history of each institution at frequent intervals. In this way all extraordinary circumstances will be made palpable.

In the following table will be found the history of 13 institutions, in which, where the means were within our reach, we have calculated the percentage of recoveries on all admitted during successive periods of four years. The last three columns give the total numbers admitted and discharged cured, and the percentage during the whole history of the institution. In only one case does the percentage reach one-half. The first nine institutions included in this table, are the institutions alluded to by Mr. Mansfield. It will be found that the aggregate admissions in these 9 institutions were 19,806, of whom 8341 recovered, or 42.11 per cent.

TABLE.

	Name of Institution.	PERCENTAGE OF RECOVERIES ON ALL ADMITTED IN										Total No. of yrs. included	Number of admissions.	No. discharged as cured.	Percentage of cures.
		4 years.	8 years.	12 yrs.	16 yrs.	20 yrs.	24 yrs.	28 yrs.	32 yrs.	36 yrs.	40 yrs.				
															
1	Vermont Asylum *	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	113	3025	1433	47.37
2	Trenton Asylum *	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	113	1563	605	38.7
3	Jackson Asylum, Ia. *	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	113	851	25	26.44
4	Nashville Asylum, Tenn. *	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	113	390	109	27.94
5	Maine Asylum	33.58	39.05	41.3	50.98	.....	.....	.....	.....	.....	.....	19	2127	871	40.94
6	Butler Hospital, R. I.	24.87	32.12	32.54	.....	.....	.....	.....	.....	.....	.....	12	904	246	27.4
7	Hartford Retreat	50.00	55.00	55.18	56.34	56.2	53.4	51.89	49.4	.....	.....	12	3407	1643	48.12
8	Utica Asylum	41.9	44.94	42.46	42.03	.....	.....	.....	.....	.....	.....	17	5786	2540	40.44
9	Indianapolis Hospital	41.05	55.00	.....	.....	.....	.....	.....	.....	.....	.....	35	1753	819	46.71
10	New Hampshire	30.6	35.56	42.68	46.03	.....	.....	.....	.....	.....	.....	17	1650	727	44.05
11	Central Ohio	40.44	41.34	47.11	50.06	51.12	.....	.....	.....	.....	.....	21	3480	1792	51.49
12	McLean Asylum	21.3	29.21	33.6	35.88	41.91	44.65	45.54	46.04	46.18	46.48	41	4582	2130	46.31
13	Worcester Asylum	39.00	42.3	45.5	46.4	45.75	45.81	.....	.....	.....	.....	27	5976	2747	45.96

* I have no means of obtaining the statistics of these Institutions during their early history.

To render this subject more clear, we have collated the statistics of 23 institutions in our country, which we give below, and find that, of 52,702 persons admitted into these institutions, 22,669 recovered—making 43 per cent., or 1 in every 2.32. This result is still subject to the deductions which should be made for the circumstances which we have already assigned as incident to, and perhaps inseparable from, all such statistics. Nevertheless, they serve a useful purpose ; if viewed in every possible light and placed in juxtaposition with other facts, also tabulated, they serve mutually to correct the other. Thus the influence of the mental bias of the various superintendents of these institutions may be inferred, to a certain extent, if we examine the proportion of recoveries with the number of those discharged as merely *improved*. For this purpose we give, in the following table, the number of years included in the statistics of each institution ; the number admitted ; the number discharged cured, and the percentage of cure calculated thereon. Where it was practicable, viz., in 17 institutions, we have also stated the number discharged as improved, and then calculated the percentage of the cured and improved added together, which we have termed the percentage of total improvement.

	Name of Institution.	Number of years includ'd	Number of patients admitted.	Number discharged cured.	Percentage of cure.	Number discharged as improved.	Percentage of total improvement.
1	New Hampshire Asylum.	17	1650	727	44.06	317	63.27
2	Worcester Asylum	27	5976	2747	45.96	971	62.21
3	Taunton "	5	1112	334	30.11	85	37.67
4	Butler Hospital, R. I.	12	904	296	32.74	234	58.62
5	Maine Asylum.	19	2127	871	40.94	369	58.29
6	Indiana Asylum	11	1753	819	46.71	184	57.27
7	Western Kentucky Asylum.	5½	443	111	25.05	31	32.54
8	Northern Ohio "	5	666	302	45.34	30	49.86
9	Central Ohio "	21	3480	1792	51.49	373	62.21
10	Southern Ohio "	4½	586	269	45.9	23	49.83
11	Western Virginia "	23½	1576	640	40.61	128	48.73
12	Pennsylvania "	9	1192	205	17.19	223	35.9
13	New York "	17	5786	2340	40.44	859	54.07
14	New York City "	10	4766	2105	44.16	682	58.47
15	New Jersey "	11½	1563	605	38.7	403	64.48
16	Bloomington "	10	1248	472	37.82	260	59.45
17	Pennsylvania Hospital	19	3360	1656	49.28	286	57.88
			38,188	16,291	42.66	5458	56.95
18	Mississippi Asylum.	4½	260	65	25.00		
19	Eastern Kentucky Asylum.	35	2389	882	36.80		
20	Vermont " .....	.....	3025	1433	47.37		
21	Louisiana " .....	.....	851	225	26.44		
22	Hartford Retreat.	35	3407	1643	48.22		
23	McLean Asylum.	41	4582	2130	46.31		
			52,702	22,669	43.00		

Cast the eye over the respective columns, and several curious facts will be noticed. The institutions of recent origin, and with short periods of time, report the percentage of cures usually less in comparison, sometimes below the average. This agrees with the early history of all institutions, as was shown in the former table. It will also be seen that some institutions report a high percentage of cures, whose "total improvement" is less than that of others whose cures are stated considerably lower. Thus, the Central Ohio, whose cures are 51.49 per cent., and Indiana Hospital 46.71, exceed New Hampshire 44.06, Worcester 45.96, and New Jersey 38.7; yet are both below these in the percentage of total improvement. There is also a greater variation in the proportion of the recoveries observed in the different institutions, than in the proportion of the recovered and improved, taken together. Of course certain circumstances, peculiar to

the respective institutions, have much to do with the larger or smaller proportions obtained. Yet, everything considered, we cannot be very far wrong in the conclusion, that while we observe a tolerable degree of uniformity in estimating what constitutes *improvement* in the mental condition of the insane, a greater diversity of opinion seems to prevail as to the precise point of improvement, when a patient may be regarded as *recovered*. This difference must of course depend more upon the mental complexion of the observers than on the condition of the patients observed. The moral is obvious.

One point deserves attention for a moment. How does the relative proportion of males and females, who recover from insanity, stand? We append such statistics as we have been able to glean on this question. So far as they extend—and they refer only to 11 institutions—they show that of 11,178 men, 4751 recovered, while of 10,342 women, 4569 were restored. The percentage of cure will therefore stand as 42.5 for males, and 44.17 for females.

Name of Institution.	MALES.			FEMALES.		
	Admitted	Cured.	Percent- age of cure.	Admitted	Cured.	Percent- age of cure.
Western Virginia	934	360	38.54	642	280	43.61
Pennsylvania State Asylum	705	122	17.23	487	83	17.04
Louisiana	521	133	25.52	330	92	27.88
Central Ohio	1760	879	49.88	1720	913	53.08
Southern Ohio	301	136	45.18	285	133	46.66
Indiana	883	410	46.43	870	409	47.
West Kentucky	269	74	27.5	174	37	9.54
Pennsylvania Hospital	1671	802	47.99	1518	760	50.06
Taunton "	564	179	31.73	548	155	28.46
Worcester "	2825	1264	44.35	2950	1394	47.25
New Jersey "	745	292	38.92	818	313	38.26
	11,178	4751	42.5	10,342	4569	44.17

The preceding tables include all varieties in the form as well as in the length of duration of mental disease. Undoubtedly certain classes of cases are more favorable in their prognosis than others. Those whose symptoms are maniacal in their nature, are more amenable to treatment than those in whose history mental depression is the char-

acteristic feature. So, also, like all other forms of disease, the earlier the symptoms of mental disturbance are detected and the patient placed under proper treatment, the more certain are the probabilities of a favorable termination, and usually of a more rapid convalescence. These points, unfortunately, cannot be illustrated by such ample statistics as I could wish, as the reports of most institutions are silent respecting them. This is the more to be regretted, as the impressions which prevail as to the proportion which recover under these most favorable conditions, are exceedingly vague and unsatisfactory.



